

**Remarks**

Claims 4-8, 27-32, 36-38, 42-46 and 50-53 are currently under examination. Claims 8, 29, 32, 38 and 50-53 have been amended, and claims 54-69 have been added. Support for the claim amendments can be found throughout the specification and the amendment to claims as originally filed. In particular, support for the claims 8, 29, 32, 38, 50-69 can be found, for example, at page 19, lines 7-18. No new matter has been added.

In the Office Action of September 9, 2003, claims 4, 27-32 and 42-46 were indicated as allowable if rewritten in independent form including all of the elements of the base and intervening claims. These claims have been rendered independent from rejected claims and are thus believed to be allowable.

Cancellation or amendments of claims should in no way be construed as an acquiescence to any of the Examiner's rejections. The cancellation or amendments to the claims are being made solely to expedite prosecution of the present application. Applicants reserve the option to further prosecute the same or similar claims in the instant or in a subsequent patent application.

**Objection to Claims 36-38**

In the Office Action of September 9, 2003, the Examiner objected to claims 36-38 as being of improper dependent form. Following the Examiner's suggestion, in the Response of January 9, 2004 the Applicants amended claims 36-38 to be independent from claim 1. Accordingly, reconsideration and withdrawal of the objection to claims 36-38 is respectfully requested.

**Rejection of Claims 1, 3, 5-8, 21-26 and 47-49 under 35 U.S.C. § 112, first paragraph (written description)**

In the Office Action of September 9, 2003, the Examiner rejected claims 1, 3, 5-8, 21-26 and 47-49 under 35 U.S.C. § 112, first paragraph, allegedly because the specification does not describe the invention such that one skilled in the art, at the time the application was filed, had possession of the claimed invention. Applicants respectfully traverse this rejection.

In the Response of January 9, 2004, claims 1, 3, 21-26 and 47-49 were canceled thereby rendering the rejection of these claims moot. The only other rejected claims, claims 5-8, were amended to depend from claim 4, which claim was indicated by the Examiner as allowable if rewritten in independent form. Since claim 4 was rewritten in independent form, claims 5-8 should also be allowable. Furthermore, in many places the specification describes vectors comprising nucleic acids (for example, at pages 33-35, lines 12-32), cells comprising nucleic acids (for example, at page 15, lines 20-23) and methods for producing a polypeptides by transfecting a cell with a nucleic acid (for example, at pages 33-38, line). Furthermore, the Applicants provide an example in which vectors containing the claimed nucleic acids are used to transfect cells that express polypeptides encoded by the claimed nucleic acids. (Example 3, pages 61-62). Thus, the Applicants reasonably convey to one skilled in the art that the inventors had possession of the claimed invention at the time the application was filed.

Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

**Rejection of Claims 1, 3-8, 21-26 and 47-49 under 35 U.S.C. § 112, first paragraph (enablement)**

In the Office Action of September 9, 2003, the Examiner rejected claims 1, 3-8, 21-26 and 47-49 under 35 U.S.C. § 112, first paragraph 1, allegedly because the specification does not describe the claimed invention in such a way as to enable one skilled in the art to make and/or use the invention. Applicants respectfully traverse this rejection.

In the Response of January 9, 2004, claims 1, 3, 21-26 and 47-49 were canceled, thereby rendering the rejection of these claims moot. The only other rejected claims, claims 5-8, were amended to depend from claim 4, which claim was indicated by the Examiner as allowable if rewritten in independent form. Since claim 4 was rewritten in independent form, claims 5-8 should also be allowable. Furthermore, in many places the specification describes how to make and use vectors comprising nucleic acids (for example, at pages 33-35, lines 12-32), cells comprising nucleic acids (for example, at page 15, lines 20-23) and methods for producing a polypeptides by transfecting a cell with a nucleic acid (for example, at pages 33-38, line). Thus, the Applicants have enabled one of skill in the art to make and/or use the invention.

Accordingly, the Applicants respectfully request reconsideration and withdrawal of this rejection.

**Rejection of Claims 36-38 under 35 U.S.C. § 112, second paragraph**

In the Office Action of September 9, 2003, the Examiner rejected claims 36-38 under 35 U.S.C. § 112, second paragraph, allegedly because the specification does not particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Applicants respectfully traverse this rejection.

In particular, the Examiner stated that “the claims are vague and indefinite because they are drawn to a nucleic acid encoding a polypeptide comprising SEQ ID No: 9, yet has a mutation

at position 121” and that “ the nucleic acid encoding the mutant will not [comprise] the nucleic acid encoding SEQ ID No. 9.” In the Response of January 9, 2004, Applicants respectfully submitted that the claims had been amended to recite SEQ ID No. 30, which corresponds to SEQ ID No. 9 in which the histidine residue at position 121 has been replaced by a glutamine residue.

Accordingly, the Applicants respectfully request reconsideration and withdrawal of this rejection.

**Rejection of Claims 1, 3, 5-7, 21, 22 and 26 under 35 U.S.C. § 102(a)**

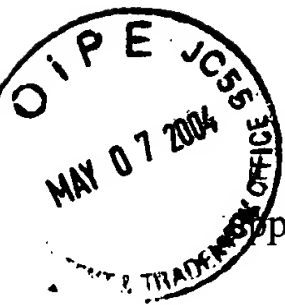
In the Office Action of September 9, 2003, the Examiner rejected claims 1, 3, 5-7, 21, 22 and 26 under 35 U.S.C. § 102(a). The Examiner asserted that Han et al. (Sequence ID AF244136, GenEMB1, 2000 April 30) anticipates the claimed nucleic acids. Applicants respectfully traverse this rejection.

In the Response of January 9, 2004, claims 1, 3, 21-26 and 47-49 were canceled, thereby rendering the rejection of these claims moot. Claims 5-7 were amended, and as such depend only from claim 4, which was not indicated as being anticipated by Han et al. In particular, the claim was indicated as being free of the cited prior art. Accordingly, the Applicants respectfully request reconsideration and withdrawal of this rejection.

**Rejection of claim 8 under 35 U.S.C. § 103**

In the Office Action of September 9, 2003, the Examiner rejected claim 8 under 35 U.S.C. § 103 as allegedly being unpatentable over Han et al. (supra) in view of Schilling et al. (Virology 247:74-85, 1998). The Applicants respectfully traverse this rejection.

As amended, claim 8 now depends from claim 5 and depends from claim 4, which the Examiner has stated is free of the cited prior art. Accordingly, the Applicants respectfully request reconsideration and withdrawal of this rejection.

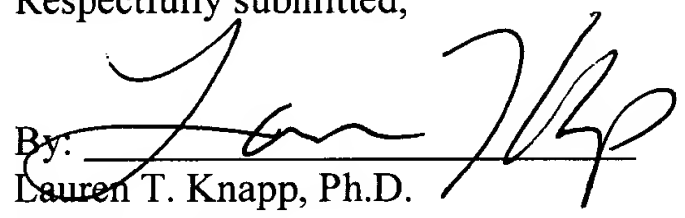


**Conclusion**

In view of the above remarks and the amendments to the claims, it is believed that this application is in condition for allowance. If a telephone conversation with Applicant's Agent would expedite prosecution of the above-identified application, the Examiner is urged to call the undersigned at (617) 832-1000.

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Respectfully submitted,

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